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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,165

02/19/2004

Laurentis Cornelis Josephus Hesselmans

30394-1118

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11/17/2006

PEACOCK MYERS, P.C.

201 THIRD STREET, N.W.

SUITE 1340

ALBUQUERQUE, NM 87102

EXAMINER

MUSSER, BARBARA J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,165

Applicant(s)

HESSELMANS ET AL.

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6-19,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,10-14,16-19,21 and 22 is/are rejected.
- 7) ☒ Claim(s) 6-9 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is required by these claims as in line 2 of each of the claims, claim 5 is referred to, and it has been cancelled. For the purposes of examination, this is considered to be a reference to claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 10-14, 16-19, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph et al.(U.S. Patent 5,959,775) in view of Hesselmanns et al.(WO 01/23451).

Joseph et al. discloses a mixture containing two reactive systems which is coated onto a substrate. The isocyanate and compound with reactive hydrogen forming one of the reactive systems is then reacted under elevated temperatures to form a solid which

can be embossed. The re-shaped material is then cured by exposure to radiation, reacting the second acrylic reactive system.(Col. 10, ll. 27-45) Since the second system reacts under radiation, one in the art would understand that it would not be reacted when radiation is not present, i.e. when the first reactive system is reacted particularly since it is intended to not react until after the embossing. The second reactive system contains compounds having isocyanate and carboxyl(acrylate) portions.(Col. 7, ll. 34-Col. 8, ll. 10) The claim is considered to require one functional group from the first group (on the one hand) and one functional group from the second group(on the other hand) as the specification appears to indicate they react together. Joseph et al. does not disclose the compound containing the reactive hydrogen being a polyhydrazide. Hesselmans et al. discloses a coating containing an isocyanate and a polyhydrazide which has a longer pot life than a mixture of an isocyanate and a polyol.(Pg. 1, ll. 8-14; Pg. 4, ll.6-15, 30-34) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the first reactive mixture of Joseph et al., made of isocyanate and a polyol, with a mixture of isocyanate and a polyhydrazide since this would result in a longer pot life for the mixture.(Pg. 1, ll. 8-14)

Regarding claim 10, Joseph et al. discloses the elevated temperature at which the first reaction occurs is 70-120C.(Col. 10, ll. 38)

Regarding claim 11, Joseph et al. discloses embossing the coating after the first reaction, and then curing the coating via radiation.(Col. 10, ll. 20-25) The reference also discloses the first reaction occurs at 70-120 C but does not disclose how long the curing takes.(Col. 10, ll. 38) However, the reference does disclose that the curing occurs in an

Art Unit: 1733

oven through which the substrate moves at a rate of 1.83 m/min.(Col. 12, ll. 3-4) It would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the first reaction in less than 10 minutes since otherwise the oven would be more than 18 meters long, which is unwieldy.

Regarding claims 12, 13, 18, and 19, since the equations for the reactions are known, determination of the optimum stoichiometric ratio for the reaction of all the components to be relatively complete would be well within the purview of one in the art. Only the expected results would be achieved.

Regarding claim 14, the di-isocyanate of Joseph et al. is considered a polyisocyanate as it contains more than one isocyanate group.(Col. 10, ll. 28-30)

Regarding claim 17, the re-molding can occur at a temperature of 149 C, which is 29-79 degrees above the temperature of the first reaction.(Col. 12, ll. 12)

Regarding claims 21 and 22, Hesselmanns et al. discloses the mixture contains an isocyanate and a compound containing reactive hydrogen and is not reactive at ambient conditions.(Abstract)

#### ***Allowable Subject Matter***

5. Claims 6-9 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: regarding claims 6 and 7, the prior art of record does not teach or fairly suggest

the compound containing the isocyanate also containing another functional group.

Regarding claim 8, the prior art of record does not teach or fairly suggest the compound containing the polyhydrazide or polysemicarbazide or carbodihydrazide containing another functional group which is non-reactive with it. Regarding claims 9 and 15, the prior art of record does not teach or fairly suggest the isocyanate having an acid group in addition to the isocyanate.

### ***Response to Arguments***

7. Applicant's arguments filed 9/5/06 have been fully considered but they are not persuasive.

Regarding applicant's argument that neither reference suggests the desirability of the combination, if either reference suggested all of the claim, the rejection would be under 102, not 103(a). Hesselmans discloses that a mixture of isocyanate and polyhydrazide has a longer shelf life than the type of mixture used by Joseph et al. This is a reason to replace the first reactive mixture of Joseph et al. with the reactive mixture of Hesselmans.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

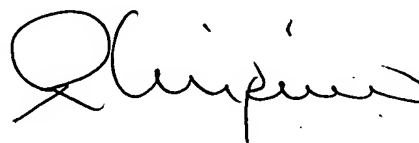
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



BJM



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